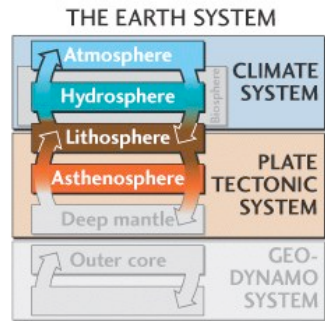


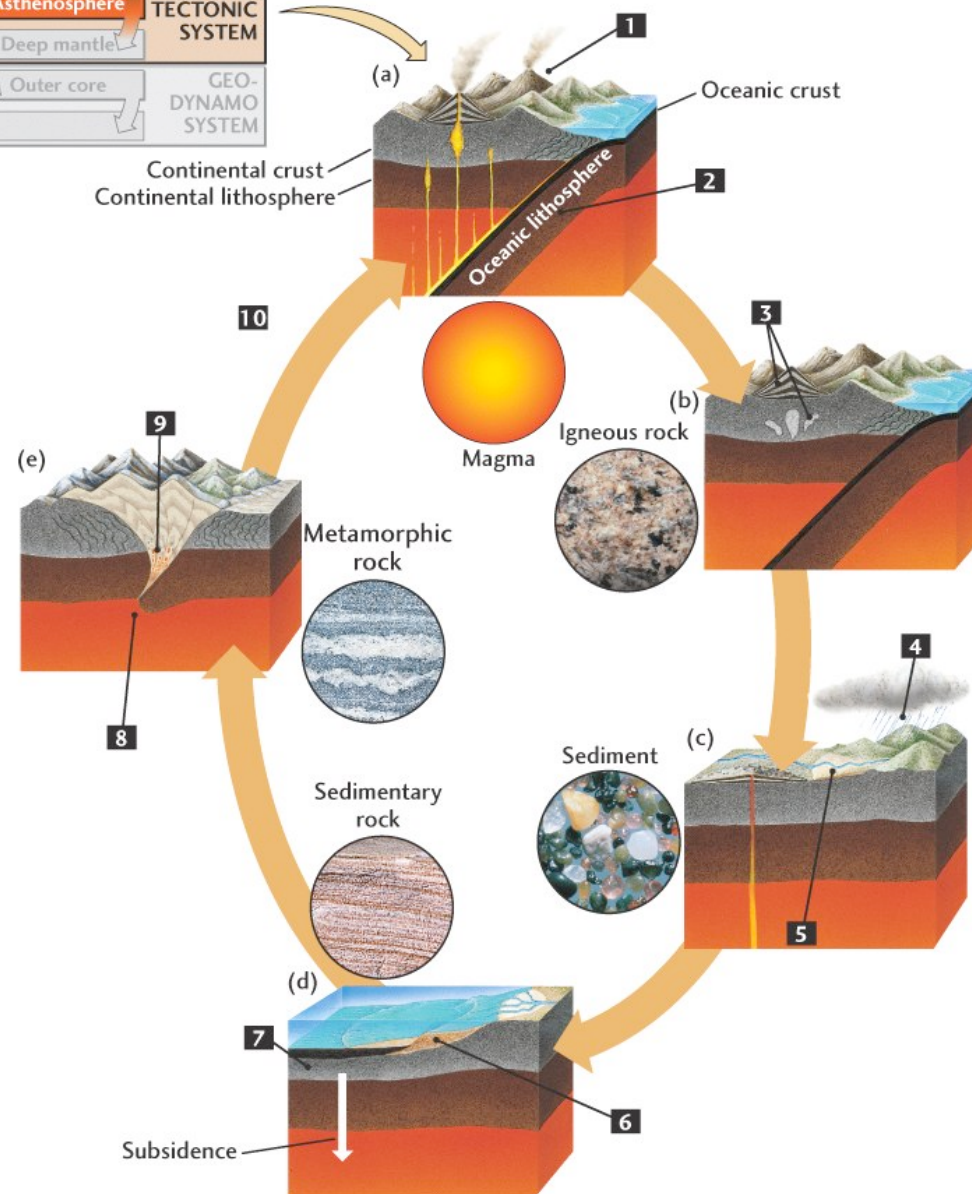
## Liquid Rocks!

*Lecture 5: Rock cycle and origin and ascent of magma*



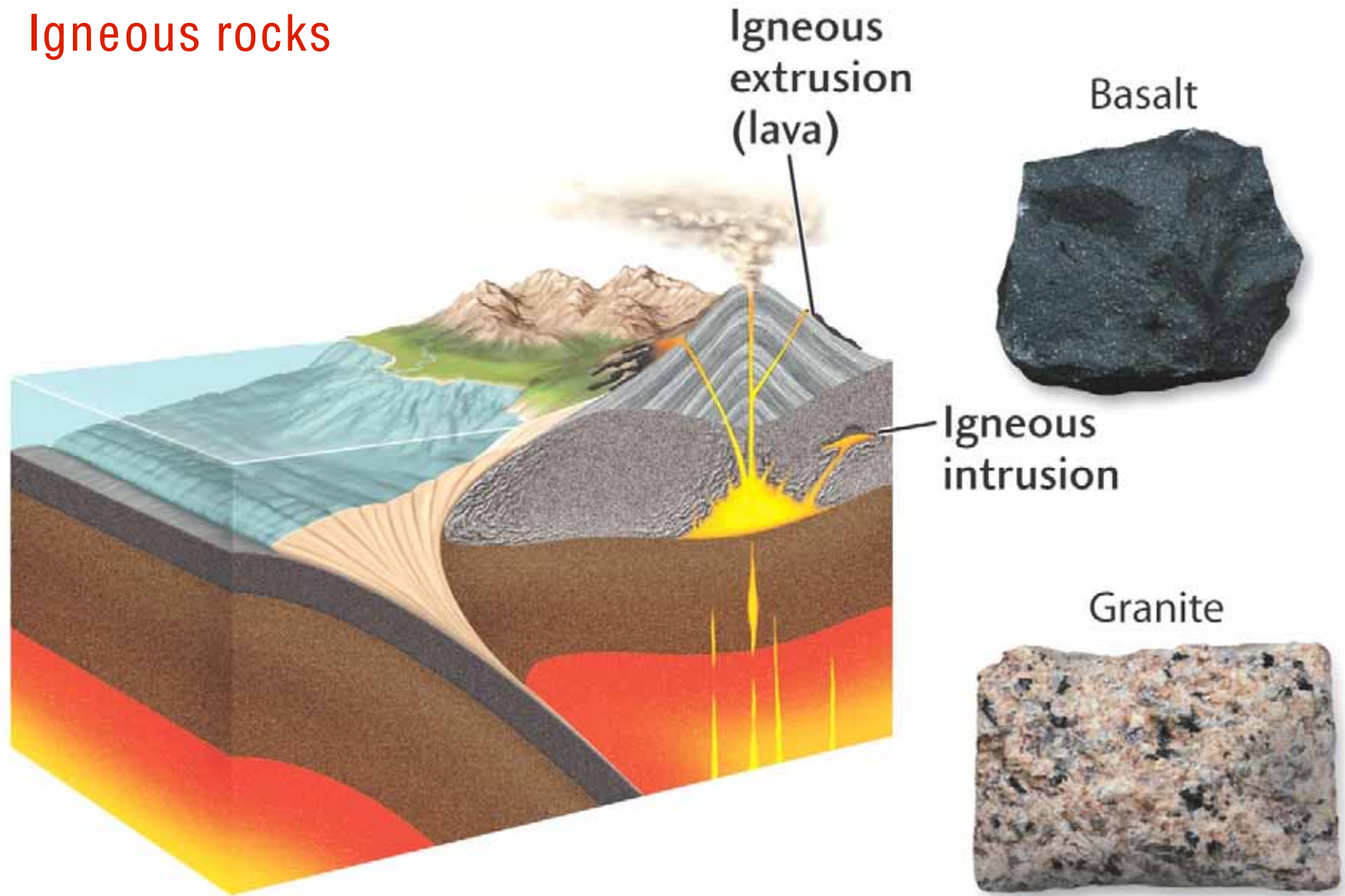


## THE ROCK CYCLE IS THE INTERACTION OF PLATE TECTONIC AND CLIMATE SYSTEMS

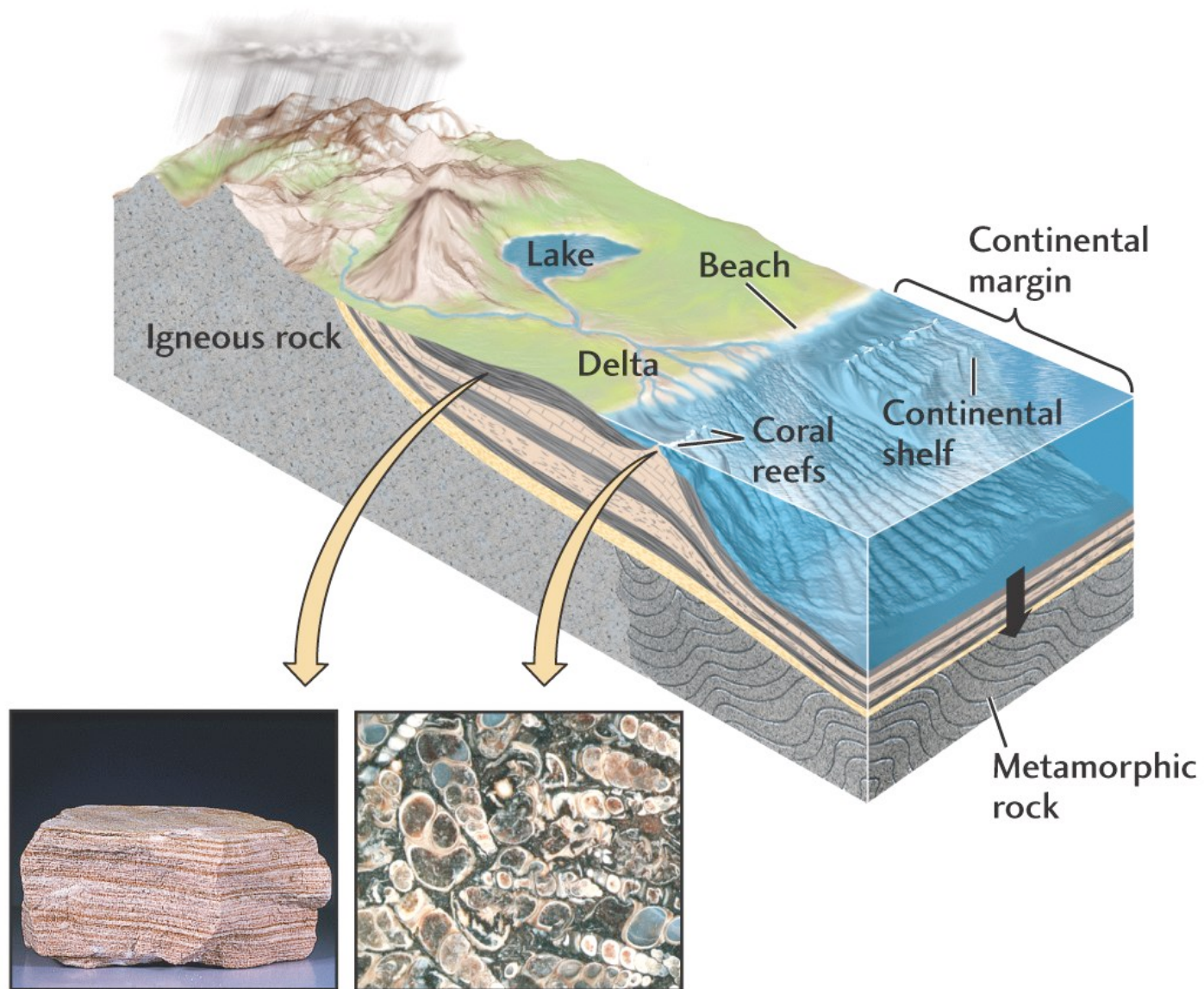




## Igneous rocks

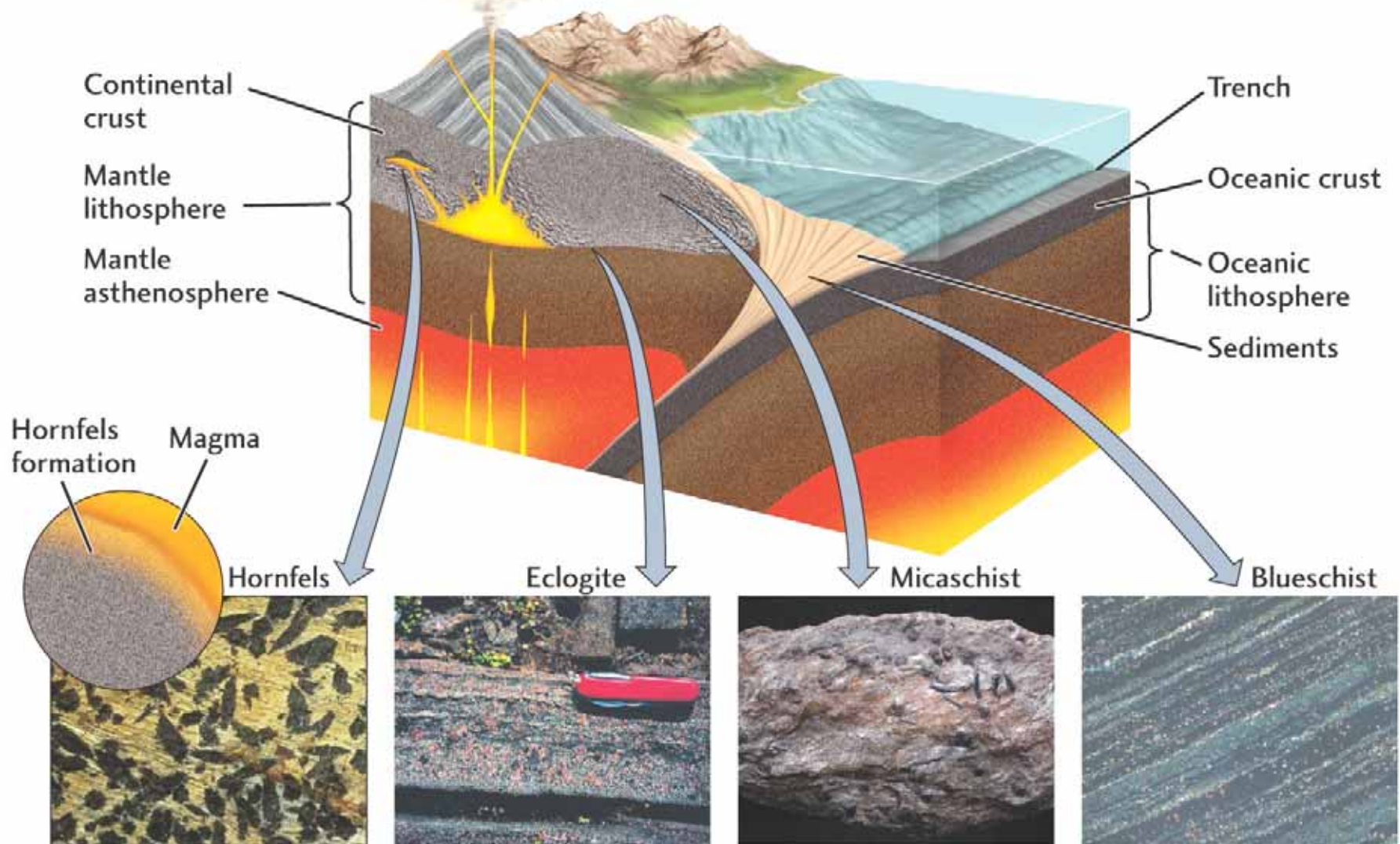


# Sedimentary rocks





# Metamorphic rocks



## Terms

Melt - semi-ordered, liquid state of matter

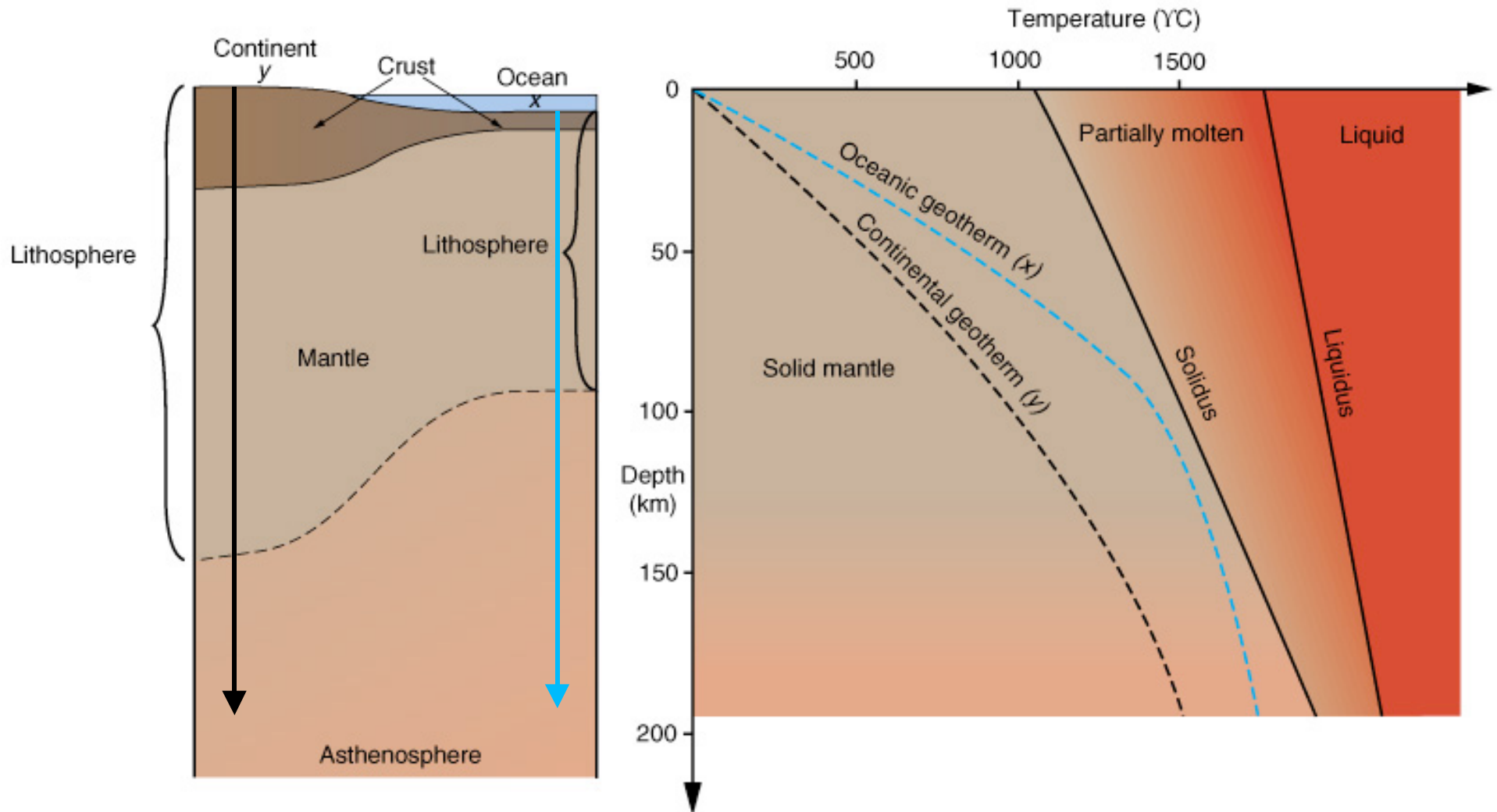
Magma - any melted (molten) rock

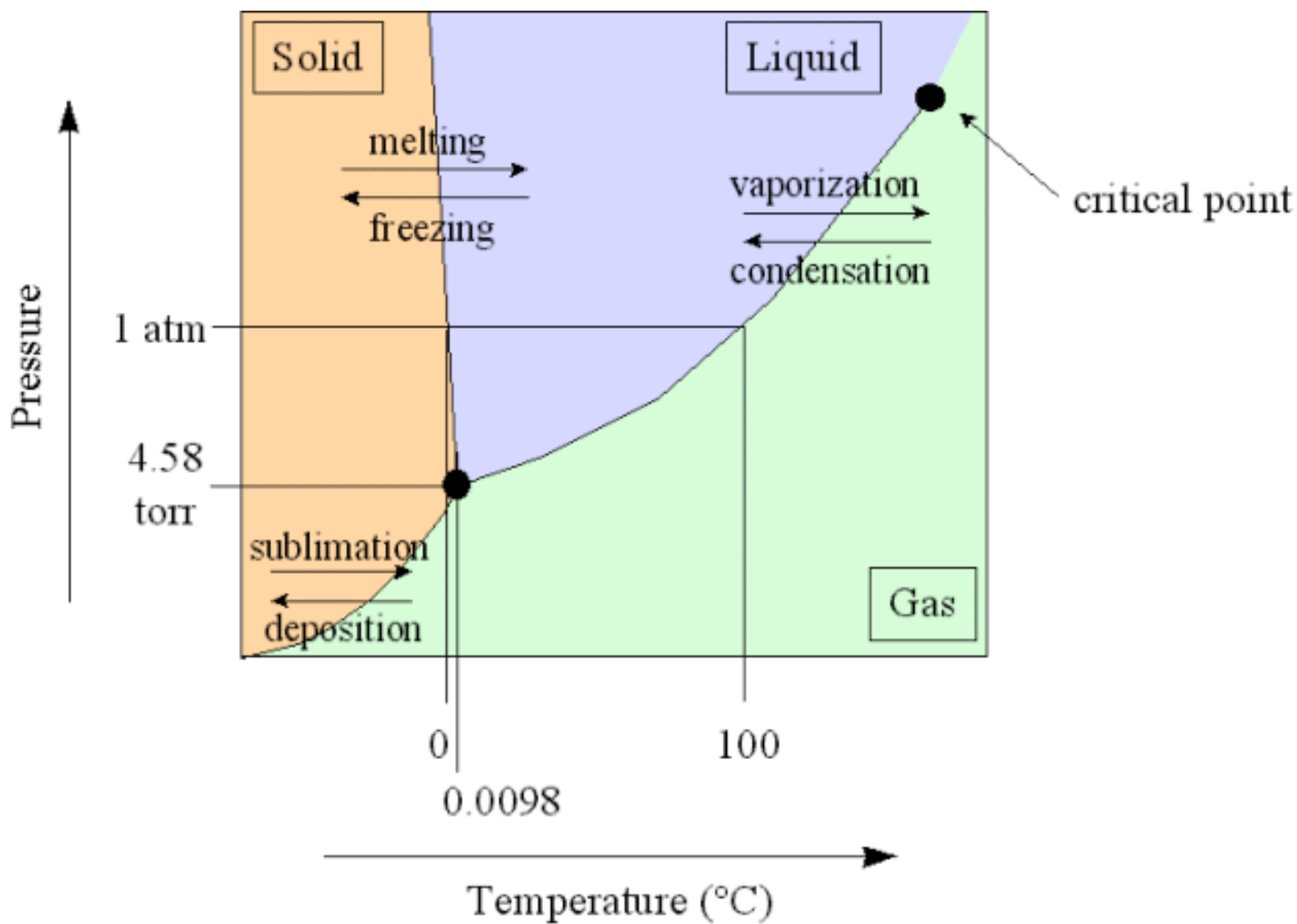
Lava - magma on Earth's surface

Igneous rock - solidified magma

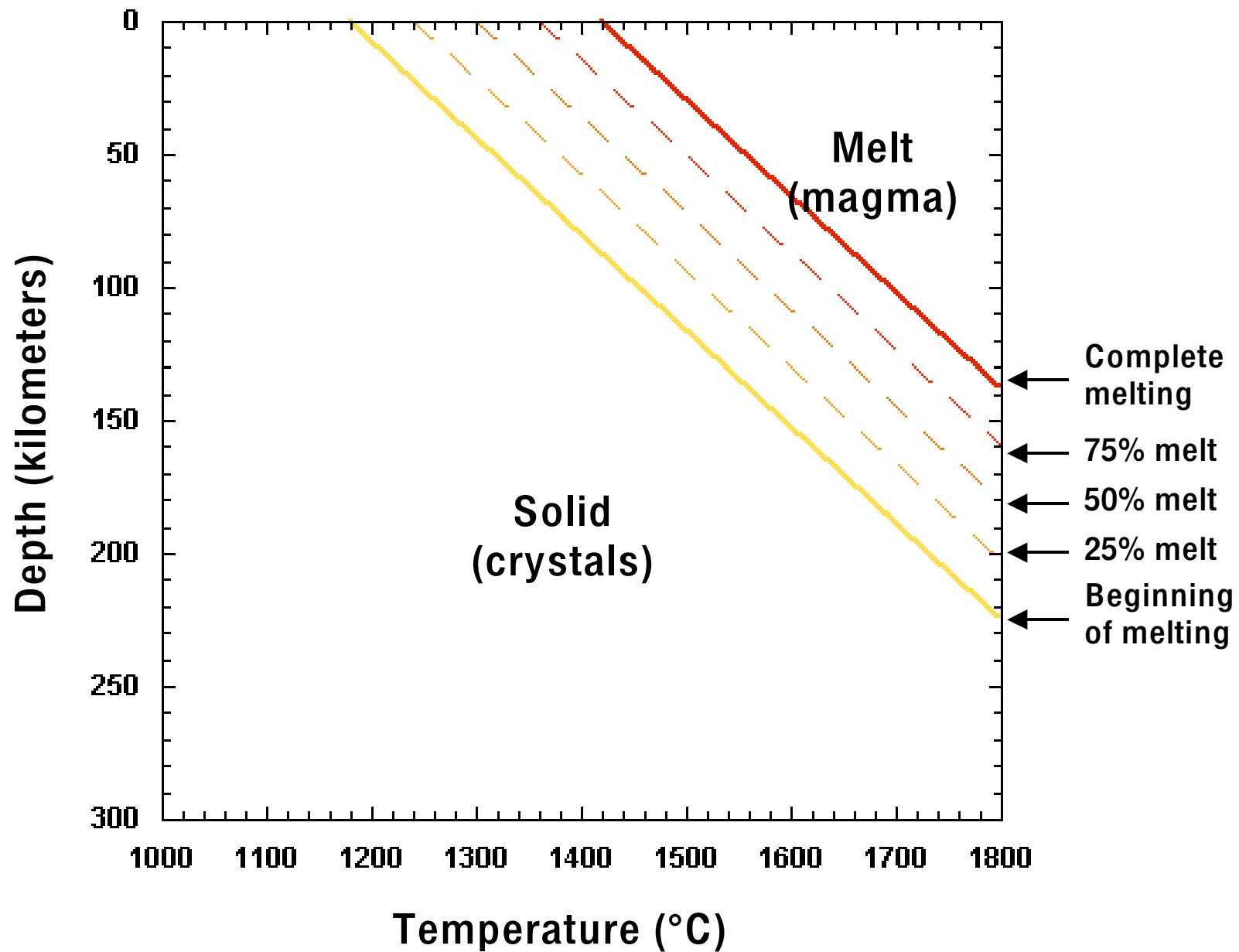


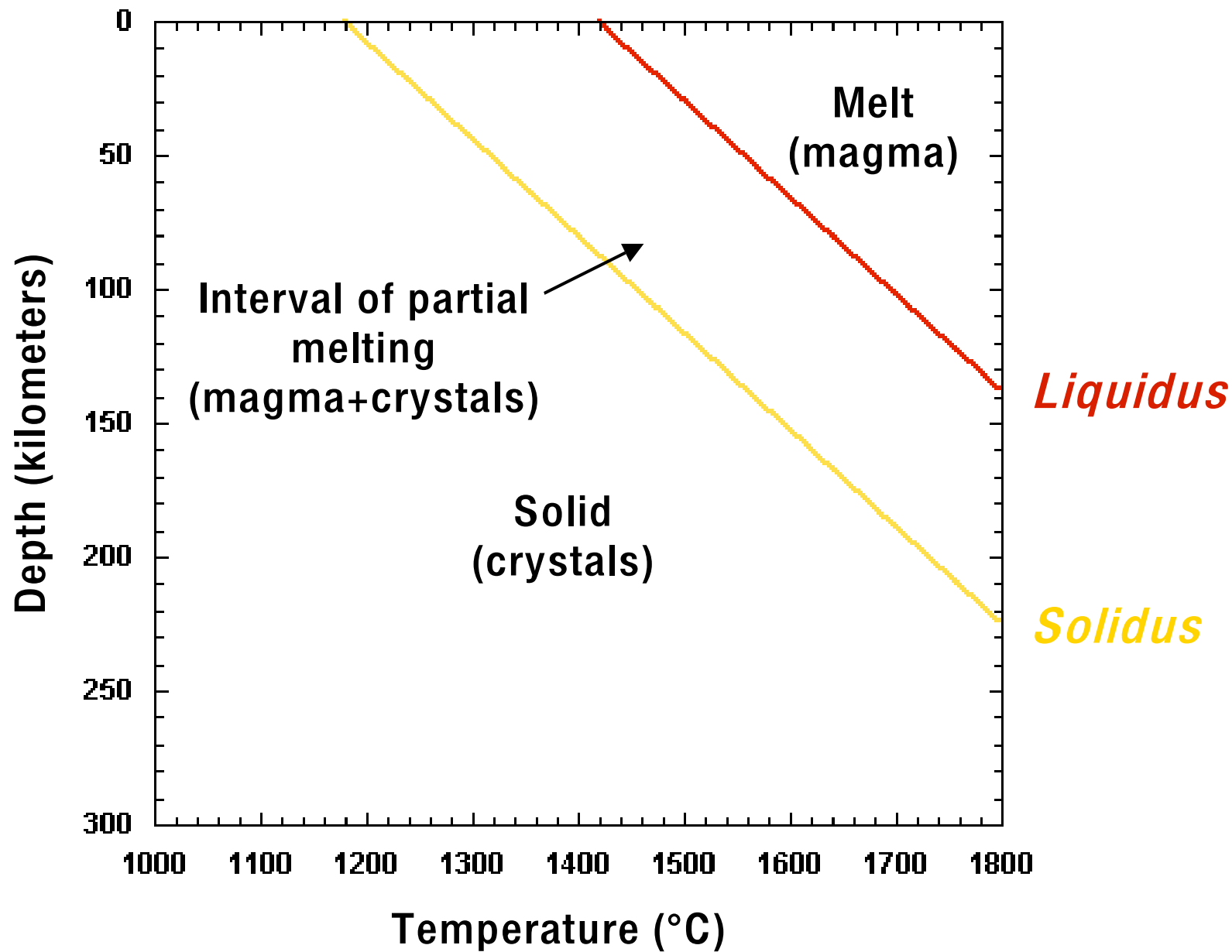
# Why do rocks melt?

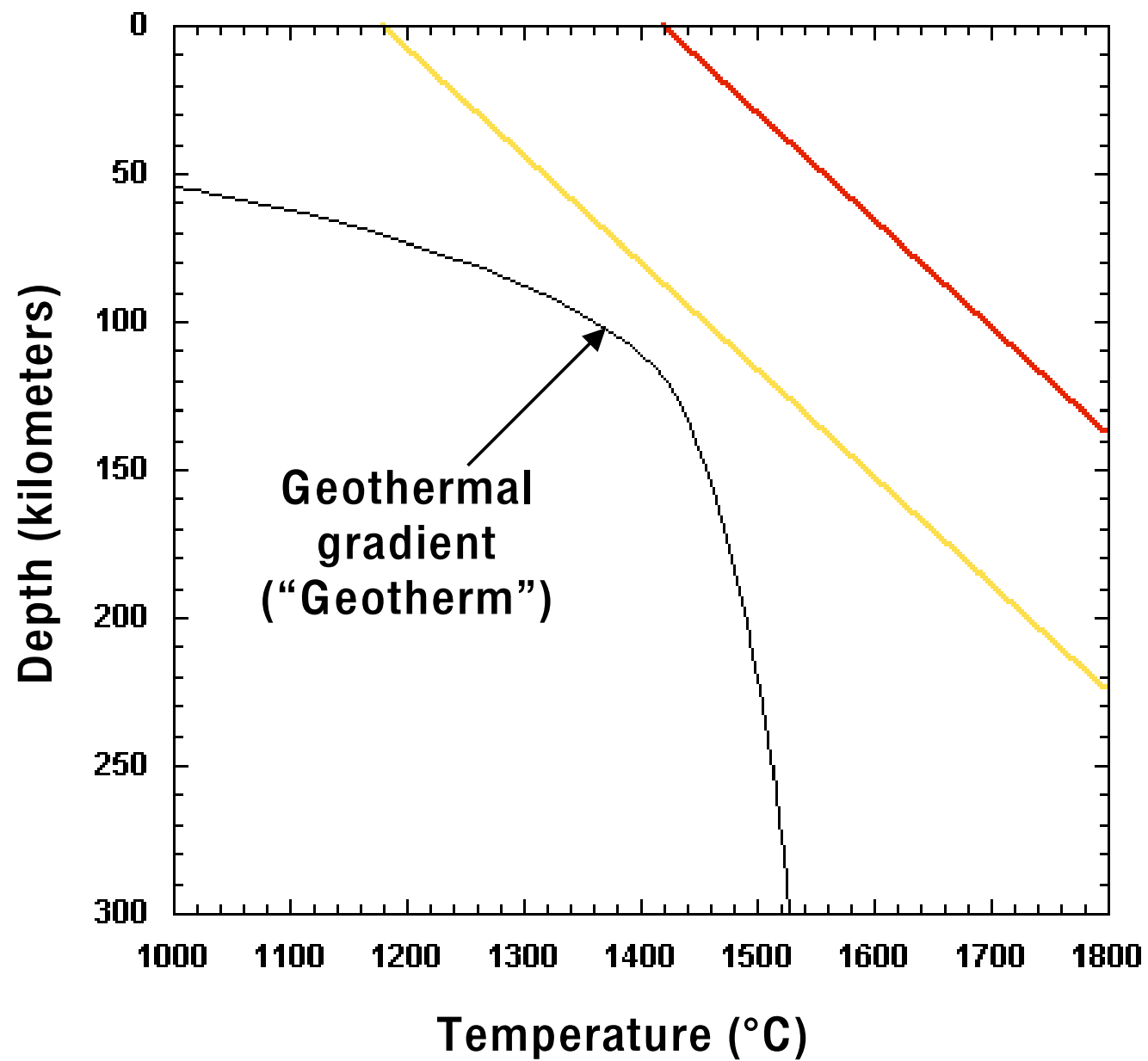




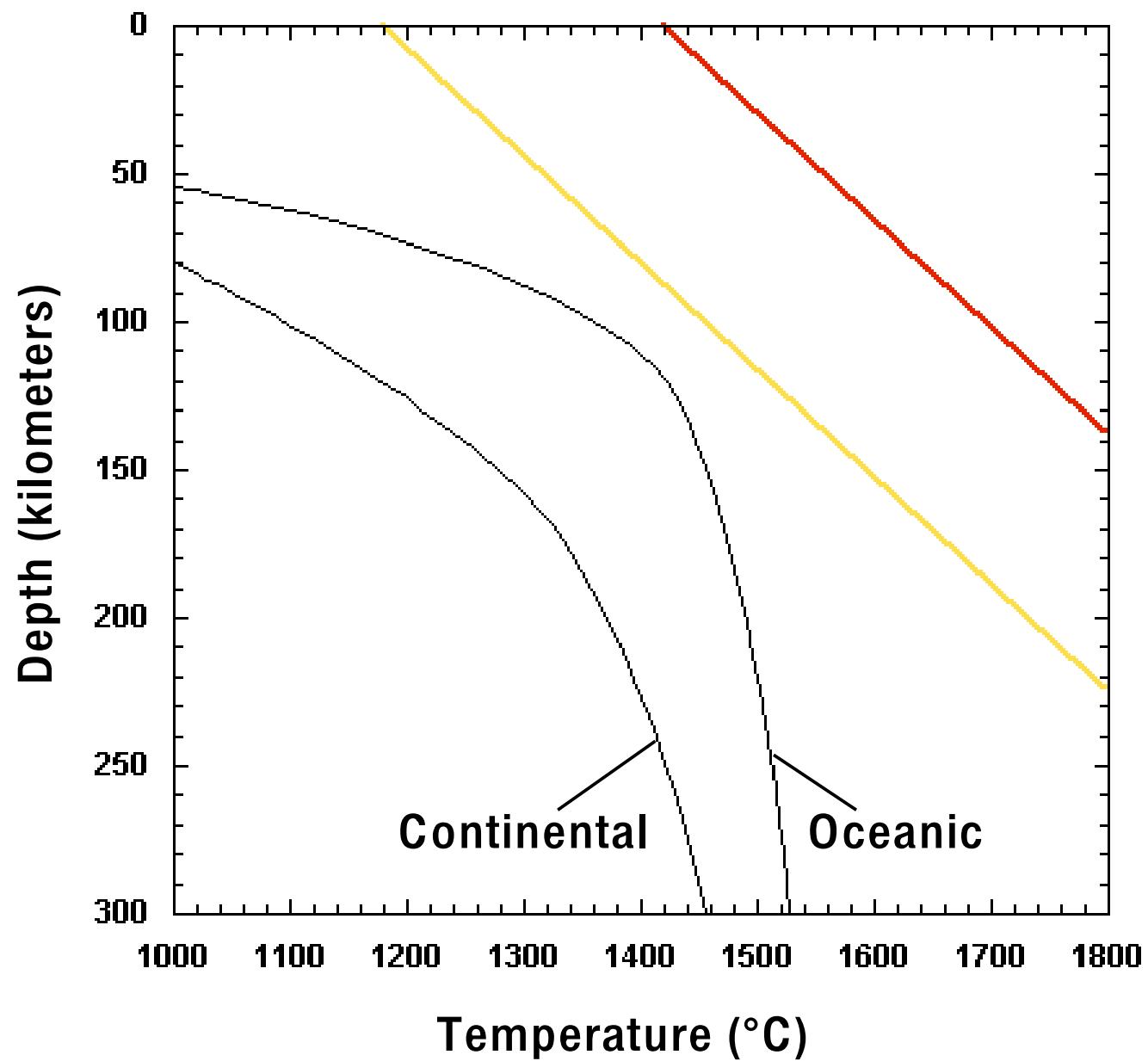




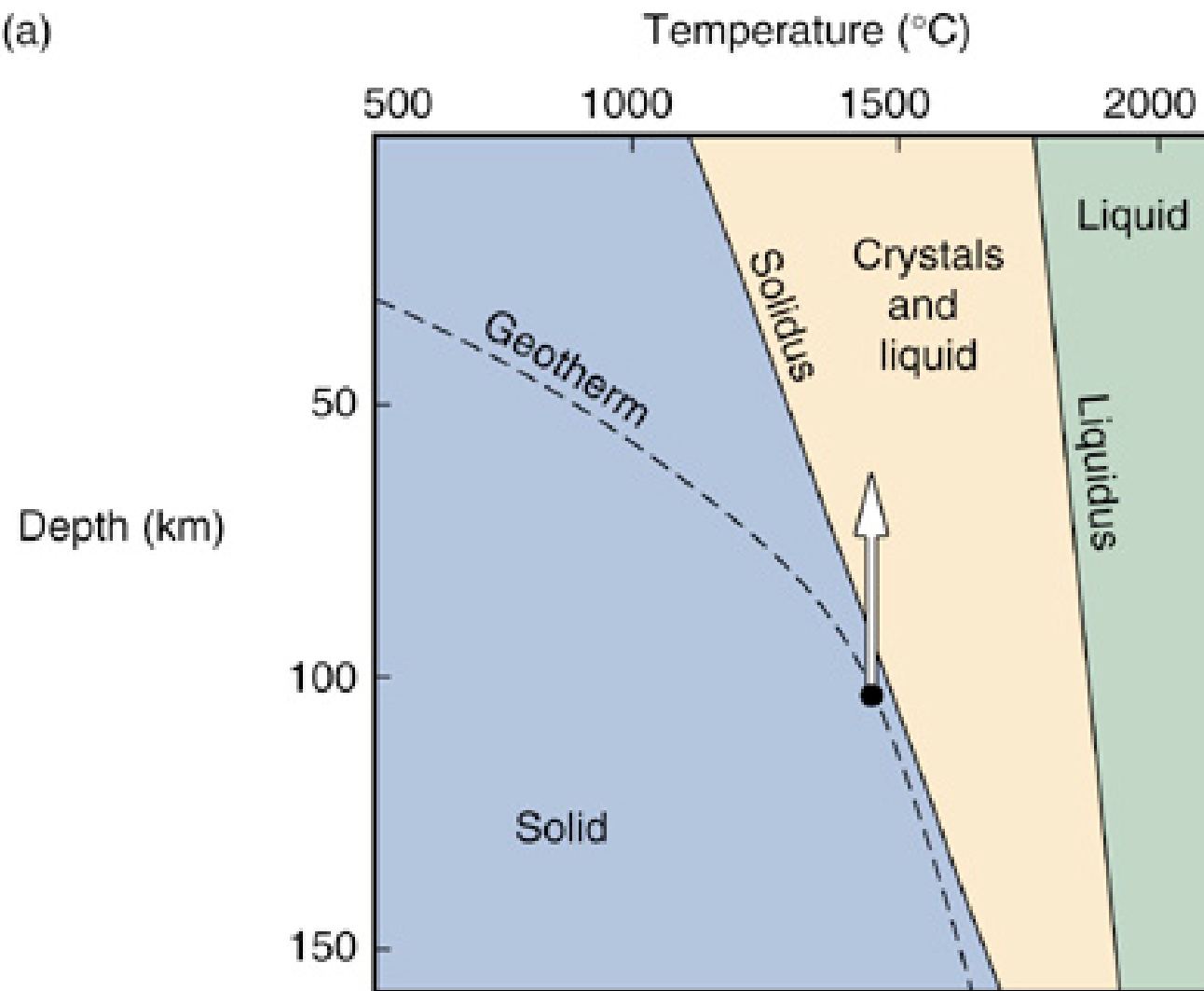




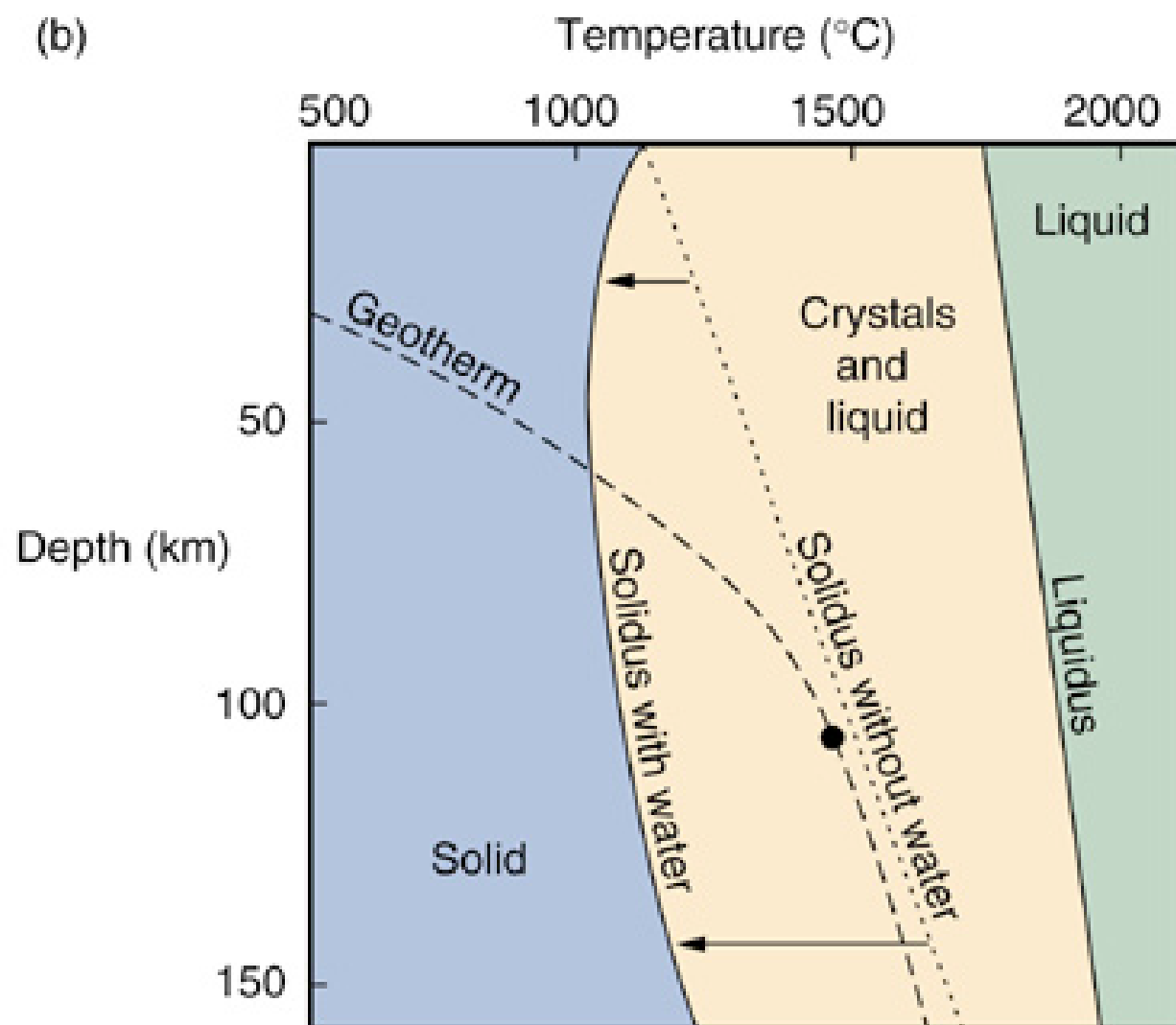




(a)

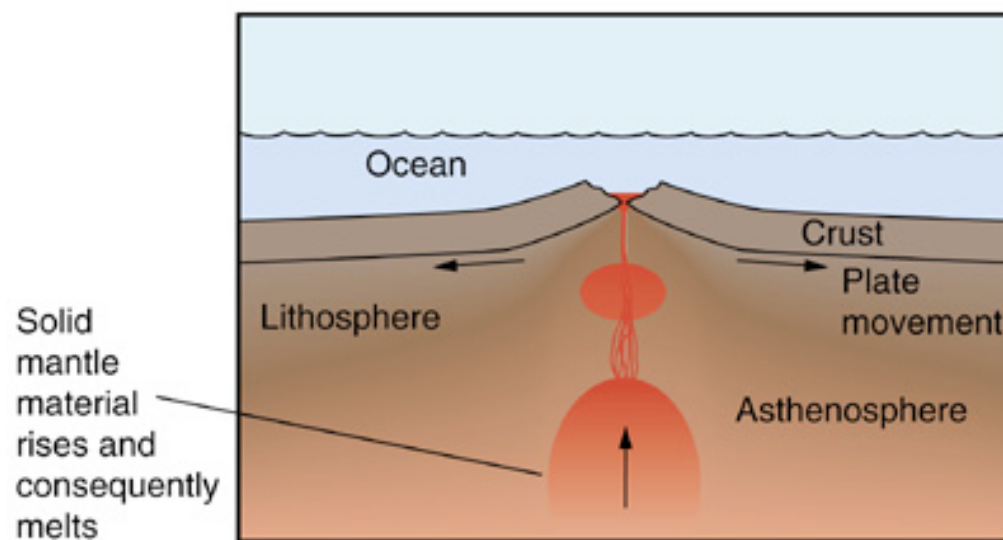
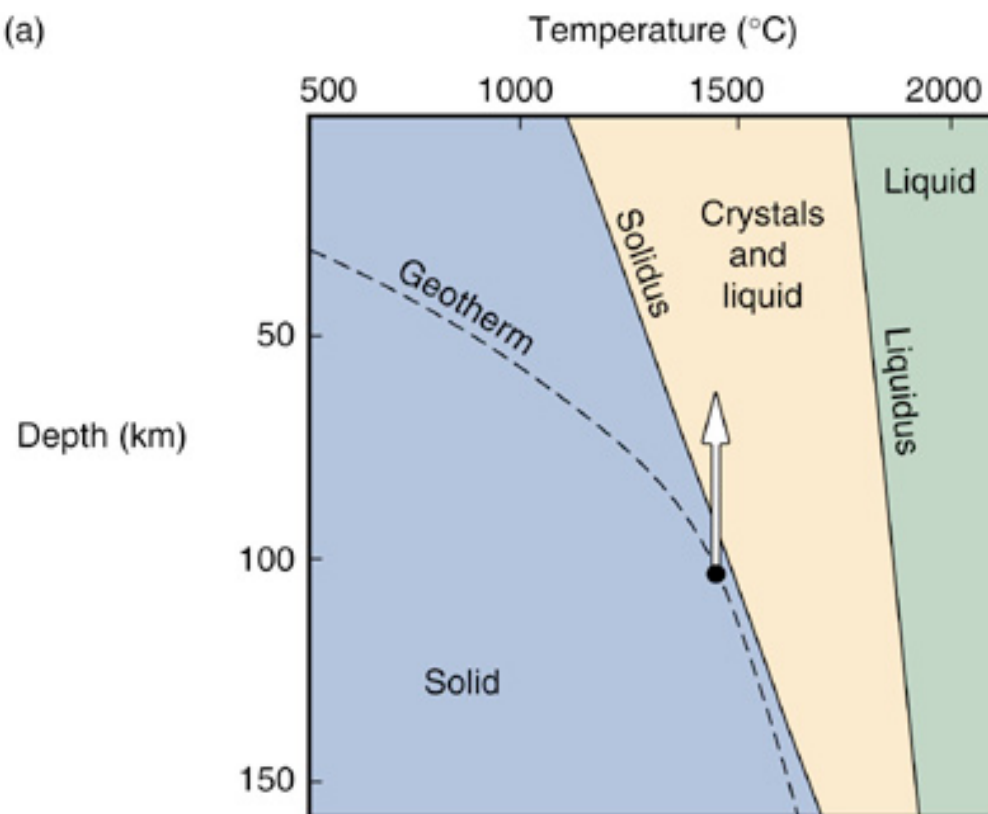


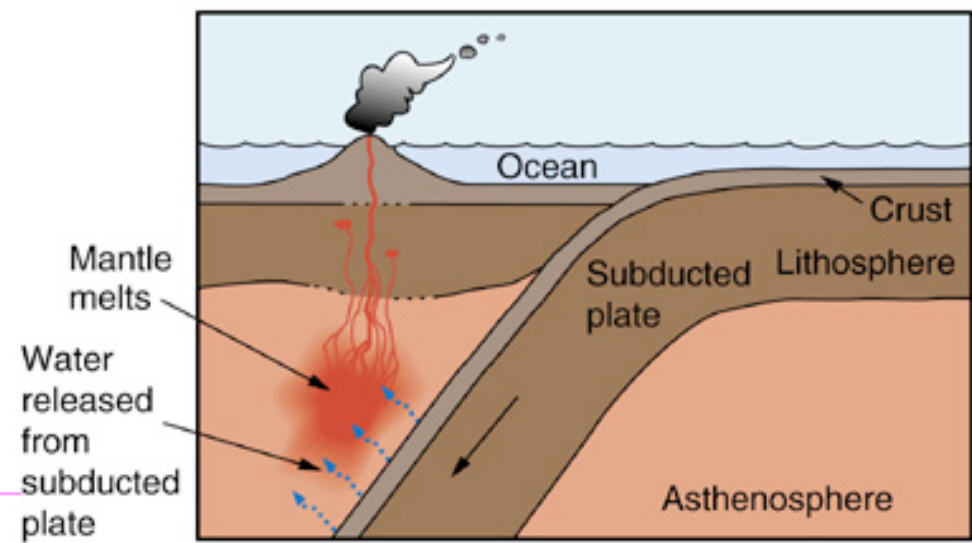
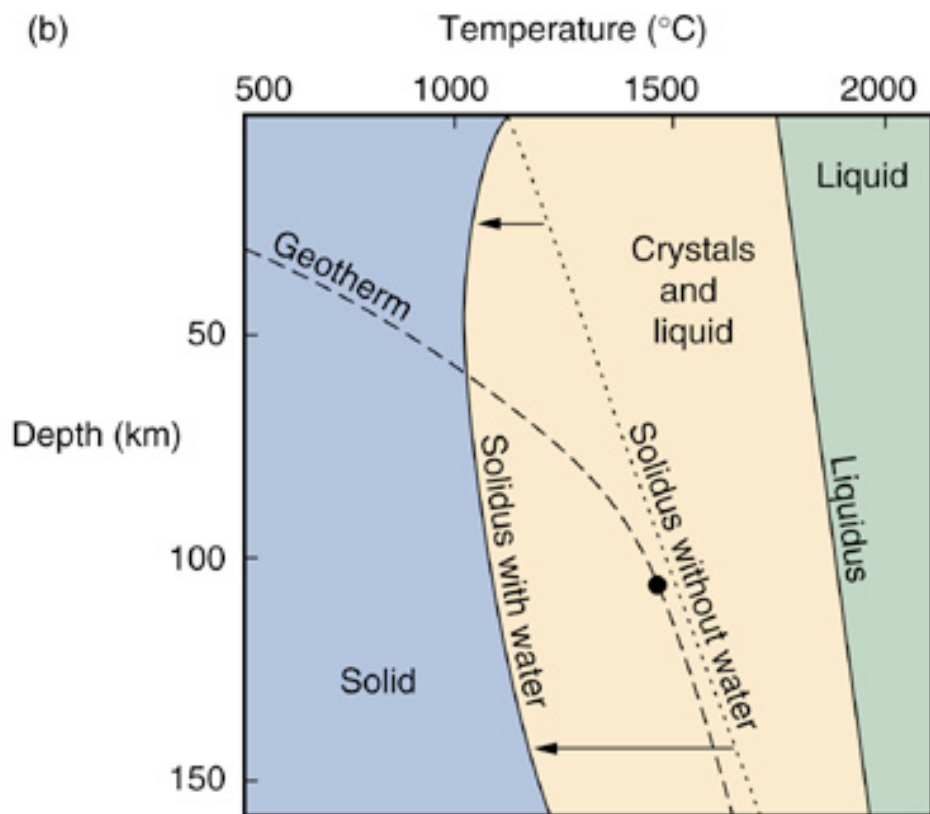
(b)



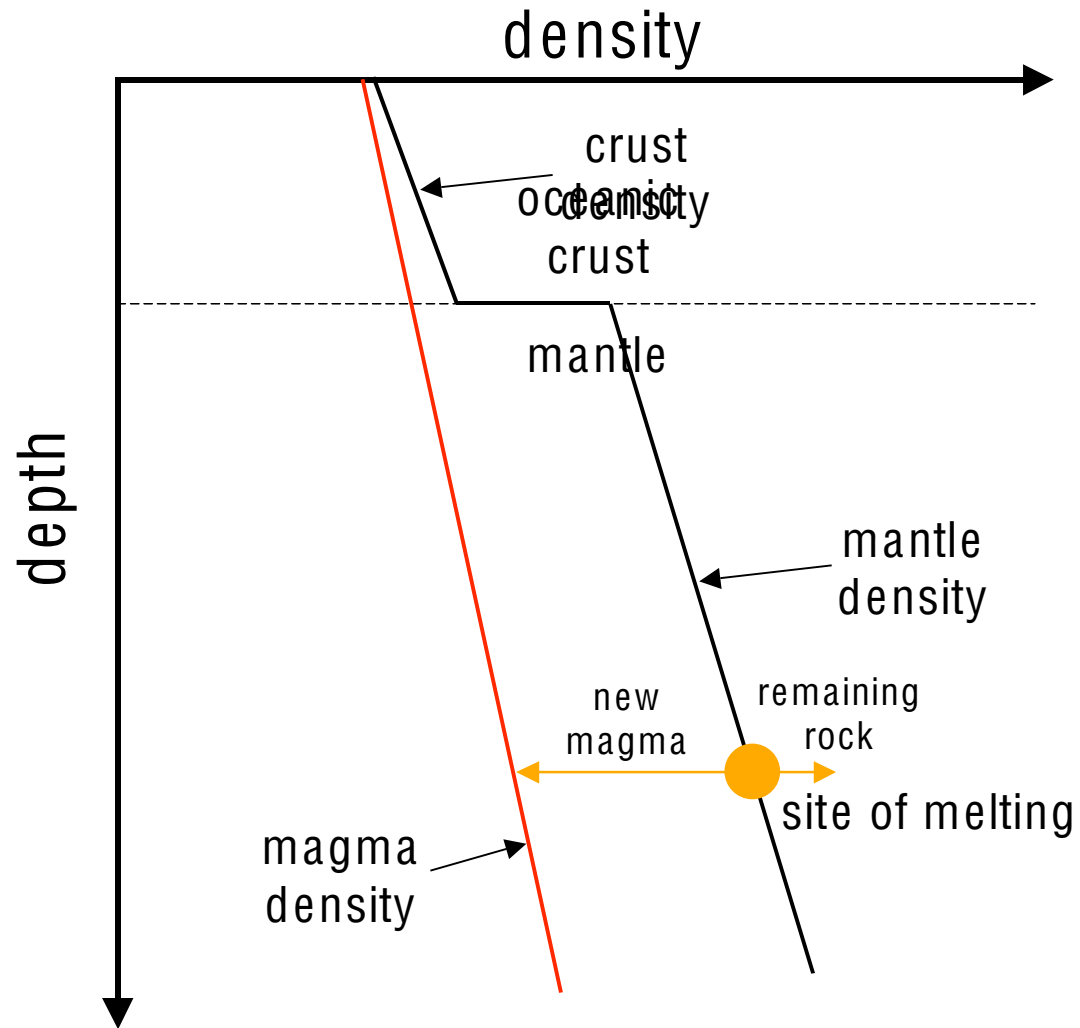


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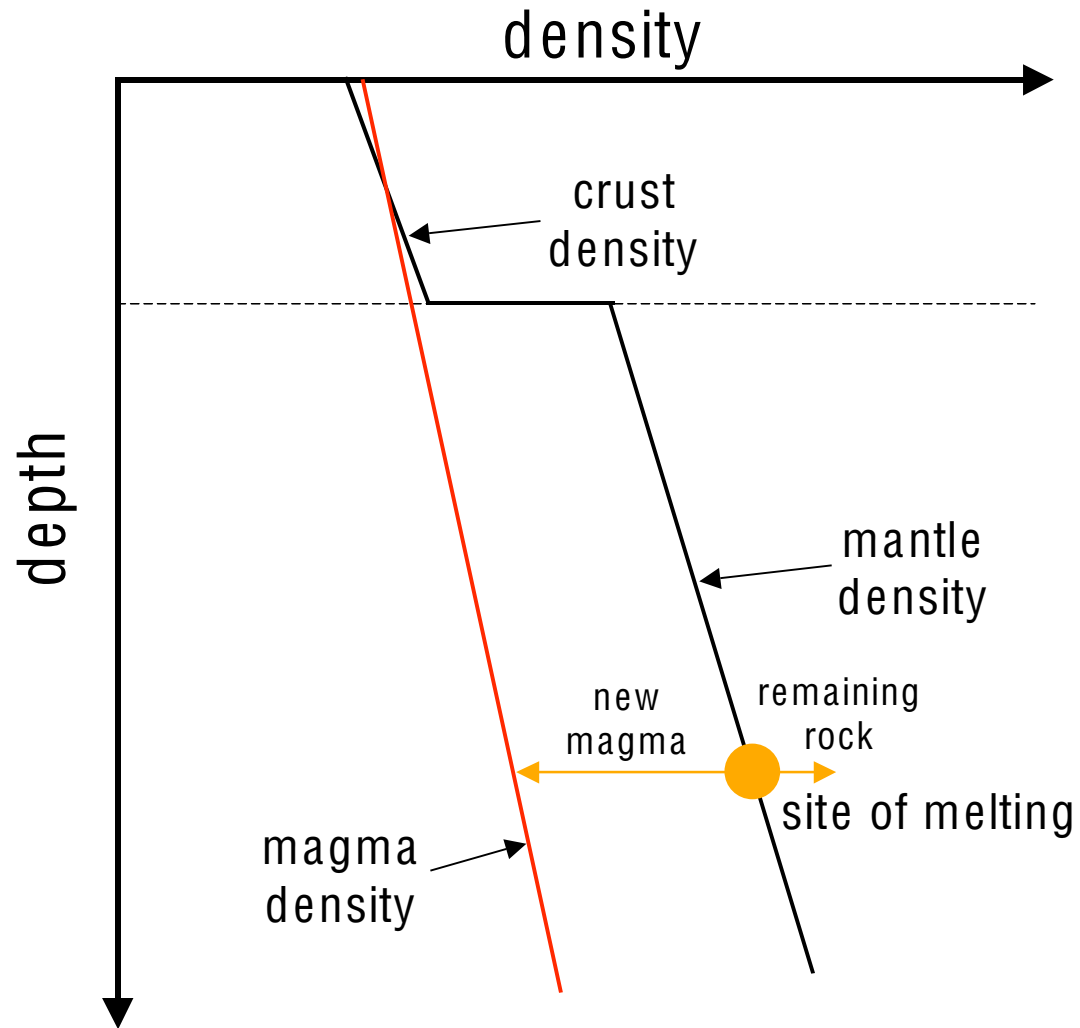


# MAGMA ASCENT through oceanic crust





# MAGMA ASCENT through continental crust



Magma ascent: density lower than crust  
leads to extrusion



Magma ascent: density equal to crust  
leads to intrusion





Magma ascent: density equal to crust  
leads to intrusion

